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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/815,377	03/21/2001	Robert David Freeman	4154-11-CIP	3940

7590 07/28/2006  
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EXAMINER

WATKO, JULIE ANNE

ART UNIT PAPER NUMBER

2627

DATE MAILED: 07/28/2006

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**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Application Number: 09/815,377  
Filing Date: March 21, 2001  
Appellant(s): FREEMAN ET AL.

**MAILED**

**JUL 28 2006**

**Technology Center 2600**

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Jonathan W. Hallman  
For Appellant

**EXAMINER'S ANSWER**

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**(1) Real Party in Interest**

A statement identifying by name the real party in interest is contained in the brief.

**(2) Related Appeals and Interferences**

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

This is in response to the appeal brief filed May 5, 2006, appealing from the Office action mailed July 26, 2005.

**(3) Status of Claims**

The statement of the status of claims contained in the brief is correct.

**(4) Status of Amendments After Final**

No amendment after final has been filed.

**(5) Summary of Claimed Subject Matter**

The summary of claimed subject matter contained in the brief is deficient. 37 CFR 41.37(c)(1)(v) requires the summary of claimed subject matter to include: (1) a concise explanation of the subject matter defined in each of the independent claims involved in the appeal, referring to the specification by page and line number, and to the drawing, if any, by reference characters and (2) for each independent claim involved in the appeal and for each dependent claim argued separately, every means plus function and step plus function as permitted by 35 U.S.C. 112, sixth paragraph, must be identified and the structure, material, or acts described in the specification as corresponding to each claimed function must be set forth with reference to the specification by page and line number, and to the drawing, if any, by reference characters.

The brief is deficient because Applicant refers to non-recited structure (i.e., Applicant alleges on page 3, third paragraph, that the claimed optical pickup unit "includes the optoelectronics for sending the laser beam focused in objective lens 90 and converting the resulting reflected laser beam into electronic signals carried over flex circuit 84 as discussed, for example, on page 19, lines 12-19"), but fails to identify any limitation as a means plus function limitation under 35 U.S.C. 112, sixth paragraph, that would bring such non-recited structure into the metes and bounds of the claim. An "optical pick up unit acting to focus a light beam on said optical disk" is claimed, but the claim is silent regarding the presence or location of any

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optoelectronics beyond the optical element which focuses a light beam onto a disk (i.e., an objective lens).

**(6) Grounds of Rejection to be Reviewed on Appeal**

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

**(7) Claims Appendix**

The copy of the appealed claims contained in the Appendix to the brief is correct.

**(8) Evidence Relied Upon**

6449225	Alon	September 10, 2002
6236634	Lee et al	May 22, 2001

**(9) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Alon (US Pat. No. 6449225 B1) in view of Lee et al (US Pat. No. 6236634).

As recited in claim 1, Alon shows an optical disk drive ("optical disk reader", see abstract line 1) comprising a housing (inherently) including a base portion; and an actuator assembly ("swing arm 22", see col. 4, line 31) having a first end, the actuator assembly being pivotally mounted to the base portion to movably position the first end parallel to a surface of an optical disk (see Fig. 2), and an optical pick up unit (including 18) acting to focus a light beam on said optical disk.

As recited in claim 1, Alon is silent regarding a portion pivotally mounted to the remainder of the actuator assembly and configured to position said first end along an arcuate path that is substantially perpendicular to the surface of the disk, said optical pick up unit connected to the portion; however, Alon explicitly teaches that "Objective lens 18 is adjusted by

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a servo mechanism to keep the light beams focused on the surface of optical disk 16” (see col. 3, lines 55-56).

As recited in claim 1, Lee et al show an optical pick up unit (including 1) connected to a portion (including 411, for example) pivotally mounted to a remainder (including 403) of an actuator assembly and configured to position a first end along an arcuate path (see Fig. 14) that is substantially perpendicular to a surface of a disk.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to pivotally mount a portion to a remainder of the actuator of Alon and configured to position a first end along an arcuate path that is substantially perpendicular to a surface of the disk as taught by Lee et al. The rationale is as follows: one of ordinary skill in the art would have been motivated to avoid a head crash resulting from a flying height that is too low (see col. 3, lines 45-53), and to avoid a decrease in light beam intensity resulting from a flying height that is too high (see col. 12, lines 18-20) as taught by Lee et al, and to keep a light beam focused on the surface of the optical disk as taught by Alon (see col. 3, lines 55-56), and to simultaneously perform both tracking and focusing so as to recover from disk defects as is notoriously well known in the art.

#### **(10) Response to Argument**

On page 6, first paragraph, Applicant argues, for the first time in the application’s prosecution history, that “The Lee reference does not disclose or suggest the inclusion of an optical pickup unit on its pivoting portion” (emphasis in original). On page 6, in the second paragraph, Applicant attempts to distinguish claim 1 from the prior art by noting that “as the objective lens within the OPU is moved for focusing purposes, the remainder of the electronics

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in the OPU moves with it.” The Examiner has considered this argument thoroughly and asserts that claim 1 does not recite any electronics in the OPU. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 26 USPQ2d 1057 (Fed. Cir. 1993).

Claim 1, in the last 3 lines, recites “an optical pick up unit connected to the portion, said optical pick up unit acting to focus a light beam on said optical disk.” Lens 1 of Lee et al acts to focus a light beam onto an optical disk 5; thus, lens 1 of Lee et al is an optical pick up unit. Furthermore, the Examiner’s interpretation of an objective lens as an optical pickup unit is consistent with common use and understanding of the term by a person of ordinary skill in the art.

The Examiner acknowledges that the specification is one of many appropriate resources available to assist in claim interpretation. *Phillips v. AWH Corp.*, 75 USPQ2d 1321 (Fed. Cir. 2005). In order for Applicant to be his own lexicographer, the special meaning of the term “optical pick up unit” must be sufficiently clear in the specification that any departure from common usage would be so understood by a person of ordinary skill in the art. *Multiform Desiccants Inc. v. Medzam Ltd.*, 45 USPQ2d 1429, 1432 (Fed. Cir. 1998). On page 3 of the appeal brief, Applicant cites the discussion of a flex circuit structure on page 19, lines 12-19 of the specification as evidence that the disclosed unit includes opto-electronics. No flex cable is claimed; thus, the disclosed flex cable does not serve to limit the structure of the claimed optical pick up unit.

Limitations appearing only in the specification must not be read into a claim because the claims are not limited to the embodiment disclosed in the specification. *Transmatic, Inc. v.*

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Gulton Indus., Inc., 35 USPQ2d 1035, 1041 (Fed. Cir. 1995). The specification mentions on page 10, lines 8-16, that “In a preferred embodiment, the optical pick up unit includes a light source, such as a laser, an objective lens for directing the light beam to the recording/playback surface of the disk and intermediate optical components such as turning mirrors and focusing lenses”.

Although Applicant could have added these limitations to the claim at any time, Applicant has intentionally drafted the claim to be broader than this preferred embodiment, and has kept such limitations out of the claim. The limitation “optical pick up unit acting to focus a light beam on said optical disk” is broad enough to embrace optical pick up units with prisms instead of turning mirrors, as well as an optical pick up unit consisting of an objective lens. Although the specification mentions a “laser resident in the OPU 22” on page 20, lines 1-2, the claim limitation “optical pick up unit acting to focus a light beam on said optical disk” is written broadly enough to embrace other locations for a laser. For example, a laser could be located remotely and the beam could be delivered to the OPU via fiber optics. Furthermore, the claim limitation “optical pick up unit acting to focus a light beam on said optical disk” is written so broadly that the light beam could come from a source other than a laser. Applicant’s choice to draft the claim broadly enough to embrace these other possibilities indicates no intent to disclaim any OPU that falls outside the preferred embodiment.

Moreover, the prosecution history contains no attempt by Applicant to add such limitations to the claim currently on appeal. Prosecution history is also germane to claim interpretation. Phillips v. AWH Corp., 75 USPQ2d at 1329.

Furthermore, even if Applicant somehow convinced the BPAI that any specific non-recited opto-electronics were included in the limitation “optical pick up unit acting to focus a

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light beam on said optical disk”, there would be no invention in relocating known parts, when the functioning of the apparatus is not thereby changed. In re Japikse, 181 F.2d 1019, 86 USPQ 70 (CCPA 1950). It is clear from the specification that it is the location of an objective lens that is critical. See, e.g., page 5, lines 10-12, “for miniaturization purposes, it is critical to minimize this distance between the objective lens and the data layer on the disk.” Applicant has failed to demonstrate unexpected results due to the alleged location of any other opto-electronics, which are not claimed.

On page 6, third paragraph, Applicant argues that “The Alon and Lee references do not suggest or teach the desirability of the claimed invention” (emphasis in original). On page 6, fourth paragraph, Applicant further argues that the Examiner has relied upon motivation “gleaned from the Applicants’ disclosure”. The Examiner has considered this argument thoroughly and asserts that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

Here, the motivation to combine the references is found in the prior art of record and in the knowledge of a person of ordinary skill in the art. One of ordinary skill in the art would have been motivated to adjust a pickup unit in a plane perpendicular to the optical disk in order to avoid a head crash resulting from a flying height that is too low (see Lee et al, col. 3, lines 45-53), and to avoid a decrease in light beam intensity resulting from a flying height that is too high (see Lee et al, col. 12, lines 18-20) as taught by Lee et al, and to keep a light beam focused on the



surface of the optical disk as taught by Alon (see Alon, col. 3, lines 55-56), and to simultaneously perform both tracking and focusing so as to recover from disk defects as is notoriously well known in the art.

On page 7, first three paragraphs, Applicant notes (emphasis in original) that “Alon states in Col. 3, line 55 that there is a “servo mechanism” to move objective lens 18 to maintain focus”, that “the objective lens thus must be held by an actuator that either pulls or pushes the lens with respect to the swing arm”, and that “the Examiner points to the Lee reference (USP 6,236,634) which disclosed the provision of a distal mounting portion solely for the lens not the OPU on a non-pivoting arm that is moved in a “sled” type fashion for tracking”. On page 7, last paragraph, Applicant concludes “Thus, Lee and Alon are like oil and water: one uses a conventional sled format for tracking and the other uses a pivoting swing arm.” The Examiner has considered this argument and agrees that Lee shows linear tracking, and that Alon shows pivotal tracking. The Examiner has not proposed that these two different forms of tracking be used together; rather, the Examiner has combined the pivotal **tracking** of Alon with the pivotal **focusing** of Lee et al.

Alon and Lee et al are analogous art. A prior art reference must either be in the field of applicant’s endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). In this case, Alon and Lee are within the same field of endeavor as each other and as Applicant: optical data storage and retrieval. Also, Alon and Lee address the same problem as each other and as Applicant: focusing. Alon recognizes the need for focusing and discloses the adjustment of an objective lens position as a method for focusing (see Alon, col. 3, lines 55-56, “Objective lens 18

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is adjusted by a servo mechanism to keep the light beams focused on the surface of optical disk 16"). Alon does not explicitly show a structure for adjusting the objective lens. Lee et al show a structure for adjusting an objective lens so as to perform focusing. The references are analogous art, and it is proper to combine them to reject claim 1.

On page 7, last paragraph extending to page 8, Applicant challenges the Examiner's motivation on the grounds that "Alon is a standard "far field" optical system that does not involve the "flying head" of Lee wherein the lens rides on the disk" and that "Alon performs his focusing without any such pivoting portion. Thus, the motivation to combine simply boils down to a hindsight "it strikes me as obvious" determination". The Examiner has considered this argument thoroughly and asserts that the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981). Lee et al show a mechanism for adjusting an optical pickup in focusing an optical storage device. Alon teaches the need for adjusting an optical pickup in focusing an optical storage device. The combination of the Lee et al mechanism with the Alon device is obvious, and satisfies the claim as recited.

On page 8, first full paragraph, "Applicants readily admit that it was known to employ swing arms for tracking. Moreover, in the context of sled tracking, it is known to employ a pivoting portion for moving the objective lens." In the same paragraph, Applicant further argues that the combination of the two "involved millions of dollars of engineering and resulting

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invention”, and that the “combination leads to an undesirable coupling of focusing and tracking, which Applicants solved through their inventive “all-digital servo”, the subject of numerous other issued and pending applications.”

The Examiner has considered this argument thoroughly and notes that such servo is not recited in the claim currently on appeal.

Additionally, Alon explicitly discloses a servo in col. 3, line 55.

Furthermore, arguments of counsel cannot take the place of evidence in the record. See MPEP § 2145. Objective evidence which must be factually supported by an appropriate affidavit or declaration to be of probative value includes evidence of unexpected results, commercial success, solution of a long-felt need, inoperability of the prior art, etc. See MPEP § 716.01(c). Applicant has presented no evidence to rebut the *prima facie* case of obviousness.

Moreover, in response to applicant's argument on page 8, first full paragraph, that “Applicant invented this unusual combination because it leads to dramatic miniaturization improvements”, the fact that applicant has recognized another advantage which would flow naturally from following the suggestion of the prior art cannot be the basis for patentability when the differences would otherwise be obvious. See *Ex parte Obiaya*, 227 USPQ 58, 60 (Bd. Pat. App. & Inter. 1985).

The rejection is proper and should be affirmed.

#### **(11) Related Proceeding(s) Appendix**

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

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For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

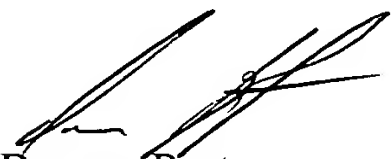
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**JULIE ANNE WATKO**  
**PRIMARY EXAMINER**

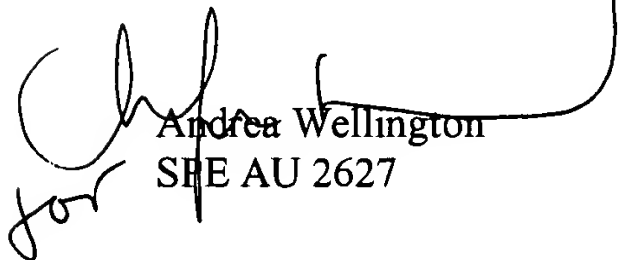
07/23/2006



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